CLAIMS

1. A method of improving tolerance to a porcine xenograft comprising immunising a mammal with an immunogen comprising:

   i) a T- cell epitope; and

   ii) a B-cell epitope characterised in that the B-cell epitope is a porcine polypeptide involved in mediating xenograft rejection and derived from a region of a porcine polypeptide which has less than 75% sequence identity to the corresponding region of the equivalent human polypeptide.

2. A method according to Claim 1 wherein the B-cell epitope is a peptide derived from at least one porcine polypeptide selected from; CD40; CD80; CD86 or VCAM.

3. A method according to Claim 1 or 2 wherein the peptide is selected from at least one peptide represented in Figure 22.

4. A method according to Claim 1 or 2 wherein the peptide is selected from at least one peptide represented in Figure 24.

5. A method according to Claim 1 or 2 wherein the peptide is selected from at least one peptide represented in Figure 26.

6. A method according to any of Claims 1-5 wherein the T – cell epitope is derived from tetanus toxoid polypeptide.

7. A composition comprising an immunogen characterised in that the immunogen has a T – cell epitope and a B- cell epitope wherein the B – cell epitope is derived from a region of a porcine polypeptide which has less than 75% sequence identity to the corresponding region of the equivalent human polypeptide.

8. A composition according to Claim 7 wherein the porcine polypeptide is expressed by vascular endothelial cells of said xenograft.

9. A composition according to Claims 7 or 8 wherein the B–cell epitope is derived from at least one porcine polypeptide selected from; CD40; CD86; CD80; VCAM.

10. A composition according to Claim 9 wherein the B- cell epitope is selected from at least one peptide as represented in Figure 22 .

11. A composition according to Claim 9 wherein the B- cell epitope is selected from at least one peptide as represented in Figure 24 .

12. A composition according to Claim 9 wherein the B- cell epitope is selected from at least one peptide as represented in Figure 26.

13. A compostion according to Claims 9 or 12 wherein the B- cell epitope is derived from the extracellular domain of CD86.

14. A composition according to any of Claims 7 - 13 wherein the T- cell epitope is derived from tetanus toxoid.

15. A composition according to any of Claims 7 - 14 wherein the composition further comprises a carrier capable of enhancing the immune response to said immunogen.

16. An antibody, or the effective part thereof, characterised in that said antibody is capable of binding to a region of a porcine polypeptide which has less than 75% sequence identity to the corresponding region of the equivalent human polypeptide.

17. An antibody according to Claim 16 wherein the antibody is a monoclonal antibody.

18. An antibody according to Claims 16 or 17 wherein the antibody is modified with at least one detectable label.

19. A method to monitor the immune status of a mammalian recipient of a xenograft comprising:

i) removing a sample from a xenograft recipient to be tested;

ii) contacting said sample with the antibody according to Claims 16 -18; and

iii) monitoring the expression of a porcine polypeptide involved in mediating xenograft rejection.

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20. A method to treat a mammal prior to receiving a xenograft comprising:

i) immunising a mammal with a composition according to Claims 7-15;

ii) assessing the immune status of said mammal to said immunogenic composition;

iii) transplantation of said xenograft tissue/organ into a recipient mammal; and

iv) monitoring the rejection response to said xenograft.

21. A method according to Claim 19 or 20 wherein the xenograft is of porcine origin and said mammal is human.

22. A method according to any of Claims 19 -21 wherein the xenograft is at least one vascularised graft and/or immunogenic porcine cell/tissue.

23. A method according to any of Claims 19 – 22 wherein the xenograft is pancreatic islets.